United States Department of Agriculture
Natural Resources Conservation Service

AQAC Assessment

Airshed Assessment: 1. Evaluate Weather/Climate & Topography Influences on Air Quality

- Examine the topography and landscape
- Scale is important! Local-Regional-Global
- Examine weather and climate influences
  - Wind, Temperature, Humidity, Precipitation and Solar Radiation
  - Know typical conditions/weather patterns associated with local AQ issues

Airshed Assessment: 2. AQAC Pollutant Formation, Sources and Resource Concerns

- Review ag air emissions of importance
- Review the AQAC Resource Concerns and the emissions that contribute to them
  - PM (direct emissions, NO_X, NH_3, VOCs)
  - Ozone (NO_X, VOCs)
  - Odors (VOCs, sulfur compounds, NH_3)
  - Greenhouse gases (CO_2, CH_4, N_2O)
- Are there (large) sources of these emissions near the farm? What about those of some distance that also may be of concern?

Airshed Assessment: 3. Rules, Regulations and Receptors

- Review whether the farm is located in or near a nonattainment or maintenance area

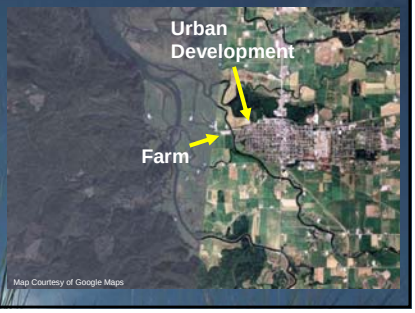
- Review whether the farm is located near a Class I area

Airshed Assessment Local Regulatory Issues

- *Life on the Urban Fringe! (aka Living on the Edge)*
- Private landowners are increasingly required to address AQAC issues
  - Rural/urban interface
  - Increased regulation in many areas
  - Examine national, state, and local regulations

Receptors of Concern Where will emissions go?

- Houses
- Hospitals
- Roads
- Schools
- … etc.



4. On-Farm Assessment: Objectives

- Identify observed problems on-farm
- Conduct an on-farm AQAC resource inventory - locate potential sources of pollutants
- Use the on-farm assessment to address identified AQAC resource concerns

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On-Farm Assessment Objectives

- Identify observed problems on-farm
  Identify Problems and Opportunities
- Conduct an on-farm AQAC resource inventory - locate potential sources of pollutants
  Inventory Resources
- Use the on-farm assessment to address identified AQAC resource concerns
  Analyze Data - Formulate Alternatives

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What to Look For

- Obvious air quality problems on site
- Sources of air pollutants on site
  (Locations, activities, operations)
- How do they relate to the issues you identified in the Airshed Assessment?

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Use Your Senses

- Taste, touch, and hearing usually play minor roles
- Use common sense, in addition to the others
- Can you **see** anything?

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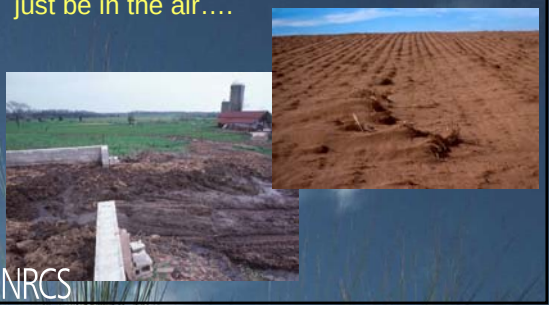
Use Your Senses

- Evidence of air quality problems may not just be in the air….



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Use Your Senses

- Taste, touch, and hearing usually play minor roles
- Use common sense, in addition to the others
- Can you **see** anything?
- Can you **smell** anything?

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Evaluate On-Farm Sources

- Which sources are the biggest problems?
- Which sources will be the easiest to work with?
- Are there other things you can do to manage/reduce/change emissions from the sources?

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Use Tools and Technologies to Aid in Assessment and Planning

- Utilize existing tools like COMET-VR
- Use other guides
  - On-Farm Assessment Checklists
  - AQAC Practices Standards Checklist
  - AQAC Activity Practice List
- Eventually, SNAP (and other tools) will help you with all of this

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Summary

- Conducting an AQAC assessment is the same as conducting an assessment for any other resource
- Look at the big picture (airshed assessment) and the details (on-farm assessment)

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